

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An image forming apparatus, comprising:

an image reading device configured to read an image of an original document;

an image forming device configured to form an image on a sheet in accordance with image data read by the image reading device;

an operation unit connecting device configured to detachably connect an operation unit, said operation unit being configured to accept inputting of operational instructions for operating the image forming apparatus;

a process controller configured to control an operation of the image forming apparatus; and

an expansion unit connecting device configured to connect an additionally attachable expansion unit, said additionally attachable expansion unit including an expansion control device configured to allocate the image reading device or the image forming device to a job and being configured to further connect to at least one function adding unit, which adds at least one function to the image forming apparatus under control of the expansion control device,

wherein the expansion control device is configured to allocate resources of the image forming apparatus, including the image reading device or the image device, between the process controller and the at least one function adding unit, and

said process controller is configured to control the operation unit to operate and to receive a control command from the expansion control device to perform image formation.

2. (Previously Presented) The image forming apparatus according to claim 1, wherein said process controller includes,

a memory configured to store at least two control programs for controlling the image forming apparatus,

an extension unit detecting device configured to detect a presence of connection of the additionally attachable expansion unit, and

a control program selecting device configured to select an applicable control program to be used by the process controller in accordance with the detection result of the extension unit detecting device.

3. (Previously Presented) The image forming apparatus according to claim 1, further comprising:

an extension unit detecting device configured to detect a presence of connection of the additionally attachable expansion unit; and

a power saving mode setting device configured to set a power saving mode to the image forming apparatus,

wherein said power saving mode setting device is configured to determine sections of the image forming apparatus to operate under the power saving mode in accordance with the detection result of the extension unit detecting device.

4. (Previously Presented) The image forming apparatus according to claim 2, wherein said extension unit detecting device is configured to detect the presence of connection of the additionally attachable expansion unit by determining if any unit is connected to the expansion unit connecting device.

5. (Previously Presented) The image forming apparatus according to claim 3, wherein said extension unit detecting device is configured to detect the presence of

connection of the additionally attachable expansion unit by determining if any unit is connected to the expansion unit connecting device.

6. (Previously Presented) The image forming apparatus according to claim 2, wherein said extension unit detecting device is configured to detect the presence of the connection of the additionally attachable expansion unit by determining that the additionally attachable expansion unit is connected when the operation unit is not connected to the operation unit connecting device, and by determining that the additionally attached expansion unit is not connected when the operation unit is connected to the operation unit connecting device.

7. (Previously Presented) The image forming apparatus according to claim 3, wherein said extension unit detecting device is configured to detect the presence of the connection of the additionally attachable expansion unit by determining that the additionally attachable expansion unit is connected when the operation unit is not connected to the operation unit connecting device, and by determining that the additionally attachable expansion unit is not connected when the operation unit is connected to the operation unit connecting device.

8. (Previously Presented) The image forming apparatus according to claim 1, wherein the expansion unit connecting device includes a data transferring device configured to communicate image data and control commands with the additionally attachable expansion unit, and a bus selecting device configured to select a data transfer destination in accordance with whether the image data or the control commands are received by the data transferring device.

9. (Previously Presented) The image forming apparatus according to claim 1, wherein the image reading device includes a contact image sensor, and said image forming apparatus includes a color identification data adding device configured to add color identification data to image data read by the contact image sensor, said color identification data indicating a location and a color component.

10. (Previously Presented) The image forming apparatus according to claim 8, further comprising:

a read image data processing device configured to apply image processing to the image data read by the image reading device;

a write image data processing device configured to convert the image data into a signal driving the image forming apparatus and configured to apply image processing to the signal required along with the converting process; and

a supervising device configured to supervise data input and output to and from the process controller,

wherein said expansion unit connecting device includes a bus configured to communicate data and a bus interface for the bus, and

at least the read image processing device, the write image processing device, the supervising device, the bus interface and the bus selecting device are arranged on a same chip.

11. (Currently Amended) An image forming system, comprising:

an image forming apparatus including an image reading device configured to read an image of an original document, an image forming device configured to form an image on a

sheet in accordance with image data read by the image reading device, an operation unit connecting device configured to detachably connect an operation unit, said operation unit being configured to accept inputting of operational instructions for operating the image forming apparatus, a process controller configured to control an operation of the image forming apparatus; and

an expansion unit connecting device configured to connect an additionally attachable expansion unit, said additionally attachable expansion unit including an expansion control device configured to allocate the image reading device or the image forming device to a job and being configured to further connect to at least one function adding unit, which adds at least one function to the image forming apparatus under control of the expansion control device,

wherein the expansion control device is configured to allocate resources of the image forming apparatus, including the image reading device or the image device, between the process controller and the at least one function adding unit, and

said process controller is configured to control the operation unit to operate and to receive a control command from the expansion control device to perform image formation.

12. (Previously Presented) The image forming system according to claim 11,
wherein

said operation unit is connected to the expansion unit connecting device,

said expansion control device of the expansion unit connecting device includes a first control device configured to control an operation of the operation unit,

said process controller of the image forming apparatus includes a second control device configured to control the operation of the operation unit, and

said image forming system further includes an operation selecting device configured to select one of the first and second control devices.

13. (Previously Presented) The image forming system according to claim 12, wherein said operation selecting device is configured to select one of the first and second devices in accordance with a processing load on the expansion control device.

14. (Previously Presented) The image forming system according to claim 12, wherein said additionally attachable expansion unit is configured to engage with at least one function adding unit, said at least one function adding unit adding at least one function to the image forming system under control of the expansion control device, and said operation selecting device selects one of the first and second devices in accordance with a number of function adding units connected to the additionally attachable expansion unit.

15. (Previously Presented) The image forming system according to claim 11, wherein

said additionally attachable expansion unit includes a first image memory configured to store first image data,

said image forming apparatus includes an image memory connecting device configured to connect a second image memory configured to store second image data, and

said additionally attachable expansion unit includes a storage control device configured to recognize and store the first image data having a same format as the second image data to be stored in the second image memory.

16. (Previously Presented) The image forming system according to claim 11, wherein said expansion control device is configured to control the additionally attachable expansion unit only when power is to be supplied to the expansion unit connecting device.

17. (Currently Amended) A method for controlling an image forming apparatus including an image reading device configured to read an image of an original document, an image forming device configured to form an image on a sheet in accordance with image data read by the image reading device, an operation unit connecting device configured to detachably connect an operation unit, said operation unit being configured to accept inputting of operational instructions for operating the image forming apparatus, a process controller configured to control an operation of the image forming apparatus, and an expansion unit connecting device configured to connect an additionally attachable expansion unit, said additionally attachable expansion unit including an expansion control device configured to allocate the image reading device or the image forming device to a job, and said method comprising:

storing at least one control program in a memory, said at least one control program being used by the process controller to control the operation of the image forming apparatus;

detecting a presence of connection of the additionally attachable expansion unit;

selecting a control program used by the process controller in accordance with a detection result;

controlling the image forming apparatus using the selected control program; and

allocating, by the expansion control device, resources of the image forming apparatus, including the image reading device or the image forming device, between the process controller and at least one function adding unit when the presence of the connection of the additionally attachable expansion unit is detected, the at least one function adding unit being

configured to connect to the additionally attachable expansion unit and to add at least one function to the image forming apparatus under control of the expansion control device.

18. (Previously Presented) The method according to claim 17, further comprising:
setting a power saving mode to the image forming apparatus,
wherein the setting step includes determining sections of the image forming apparatus to operate under the power saving mode in accordance the detection result.

19. (Previously Presented) The method according to claim 17, wherein said detection step includes detecting the presence of connection of the additionally attachable expansion unit by determining if any unit is connected to the expansion unit connecting device.

20. (Previously Presented) The method according to claim 17, wherein said detection step includes detecting the presence of the connection of the additionally attachable expansion unit by determining that the additionally attachable expansion unit is connected when the operation unit is not connected to the operation unit connecting device, and by determining that the additionally attachable expansion unit is not connected when the operation unit is connected to the operation unit connecting device.

21. (Previously Presented) The method according to claim 17, communicating, by the expansion unit connecting device including a data transferring device, image data and control commands with the additionally attachable expansion unit; and

selecting, by a bus selecting device, a data transfer destination in accordance with whether the image data of the control commands are received by the data transferring device.

22. (Previously Presented) The method according to claim 17, further comprising:

reading the image by the image reading device including a contact image sensor; and

adding color identification data to image data read by the contact image sensor, said

color identification data indicating a location and a color component.

23. (Previously Presented) The method according to claim 21, further comprising:

applying, by a read image processing device, image processing to the image data read
by the image reading device;

converting, by a write image processing device, the image data into a signal driving
the image forming apparatus and applying image processing to the signal necessitated along
with the converting process; and

supervising, by a supervising device, data input and output to and from the process
controller,

wherein said expansion unit connecting device includes a bus configured to
communicate data and a bus interface for the bus, and

wherein at least the read image processing device, the write image processing device,
the supervising device, the bus interface and the bus selecting device are arranged on a same
chip.

24. (Currently Amended) A computer-readable storage medium, including computer
executable instructions, when executed by a processor, cause the processor to perform a
method for controlling an image forming apparatus including an image reading device
configured to read an image of an original document, an image forming device configured to
form an image on a sheet in accordance with image data read by the image reading device, an
operation unit connecting device configured to detachably connect an operation unit, said

operation unit being configured to accept inputting of operational instructions for operating the image forming apparatus, a process controller configured to control an operation of the image forming apparatus, and an expansion unit connecting device configured to connect an additionally attachable expansion unit, said additionally attachable expansion unit including an expansion control device configured to allocate the image reading device or the image forming device to a job, the method comprising:

storing at least one control program in a memory, said at least one control program being used by the process controller to control an operation of the image forming apparatus;

detecting a presence of connection of the additionally attachable expansion unit;

selecting a control program used by the process controller in accordance with a detection result;

controlling the image forming apparatus using the selected control program; and

allocating, by the expansion control device, resources of the image forming apparatus, including the image reading device or the image forming device, between the process controller and at least one function adding unit when the presence of the connection of the additionally attachable expansion unit is detected, the at least one function adding unit being configured to connect to the additionally attachable expansion unit and to add at least one function to the image forming apparatus under control of the expansion control device.

25. (Previously Presented) The method according to claim 24, further comprising:

setting a power saving mode to the image forming apparatus,

wherein the setting includes determining sections of the image forming apparatus to operate under the power saving mode in accordance the detection result.

26. (Previously Presented) The method according to claim 24, wherein said detecting includes detecting the presence of connection of the additionally attachable expansion unit by determining if any unit is connected to the expansion unit connecting device.

27. (Previously Presented) The method according to claim 24, wherein the detecting includes detecting the presence of the connection of the additionally attachable expansion unit by determining that the additionally attachable expansion unit is connected when the operation unit is not connected to the operation unit connecting device, and by determining that the additionally attachable expansion unit is not connected when the operation unit is connected to the operation unit connecting device.

28. (Previously Presented) The method according to claim 24, further comprising:
communicating, by the expansion unit connecting device including a data transfer device, image data and control commands with the additionally attachable expansion unit;
and

selecting a data transfer destination in accordance with whether the image data or the control commands are received by the data transferring device.

29. (Previously Presented) The method according to claim 24, further comprising:
reading the image, by the image reading device including a contact image sensor; and
adding color identification data to image data read by the contact image sensor, said color identification data indicating a location and a color component.

30-33. (Cancelled).